

Remarks

Claims 1-24 are pending. Claims 1-14 and 18 have been allowed. Claims 15-17 and 19-24 are rejected. In response, arguments against the claim rejections are provided.

Reconsideration and allowance are requested.

REJECTION of Claim 1 UNDER 35 U.S.C. § 102

Claim 15-17 and 19-24 stand rejected on alleged anticipation grounds in view of Kuang. The Examiner has cited Kang, column 4-5, which describes the control of a range extender.

Kuang's range extender subroutine has a particular "function," namely, "to compute the electric power to be generated by the range extender" (col. 4 lines 51-54). Initializing Kang's range extender controller involves setting a desired power, and the loop measures a variety of parameters, including current, voltage, and coolant temperature, for the purpose of determining battery "state of charge," while monitoring for other conditions such as engine temperature. It is clear that Kang does not sense battery voltage and then compare that sensed voltage with a threshold voltage. Instead, Kang determines "state of charge" and compares this with a threshold value.

In contrast to Kang, claims 15-17 and 19-24 of the present invention sense and compare battery voltage with threshold values in making the control decisions. This is very different from Kang in at least two ways. One, the operation and purpose of the delay time with repeated voltage measurements the present claimed invention is to overcome misleading voltage measurements, such as when a high current is drawn and voltage is momentarily depressed. Kang, instead measures both voltage and current and then uses both sensed values to calculate a state of battery charge, for its

threshold comparison. Kang's state of battery charge determination already factors in high current draw. Kang lacks this element of the claims because Kang uses a different method to solve a different problem and thus does not even lead to the claimed combination. Two, Kang does not trigger activation of the range extender by sensing battery voltage decreasing "below a first threshold value" as in claims 15-17 and 19-24. Instead, Kang monitors "state-of-charge" of the battery and initiates a delay "when the state of charge (SOC) of the traction battery falls below a predetermined value" (column 4 lines 44-49). Fig. 2 of Kang further confirms the secondary role of battery voltage for control, by indicating "system current" and "system voltage" (not battery voltage) alongside "battery state of charge" (which includes battery voltage and other factors) in the control sequence. Kang lacks any control by sensing battery voltage and then comparing that sensed voltage to a reference.

Because claims 15-17 and 19-24 include an element (sensing battery voltage and comparing that sensed voltage with a threshold voltage reference) that is missing from Kang, reconsideration and allowance are earnestly solicited.

In view of the foregoing, and in summary, claims 1-24 are considered in condition for allowance. Favorable reconsideration of this application is respectfully requested.

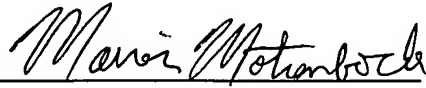
CONCLUSION

In view of the above amendment and remarks, applicants respectfully request that all rejections be withdrawn and that a notice of allowance be forthcoming. The Examiner is invited to contact the undersigned attorney for applicants at 202-912-2747 for any reason related to the advancement of this case.

Respectfully submitted,

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